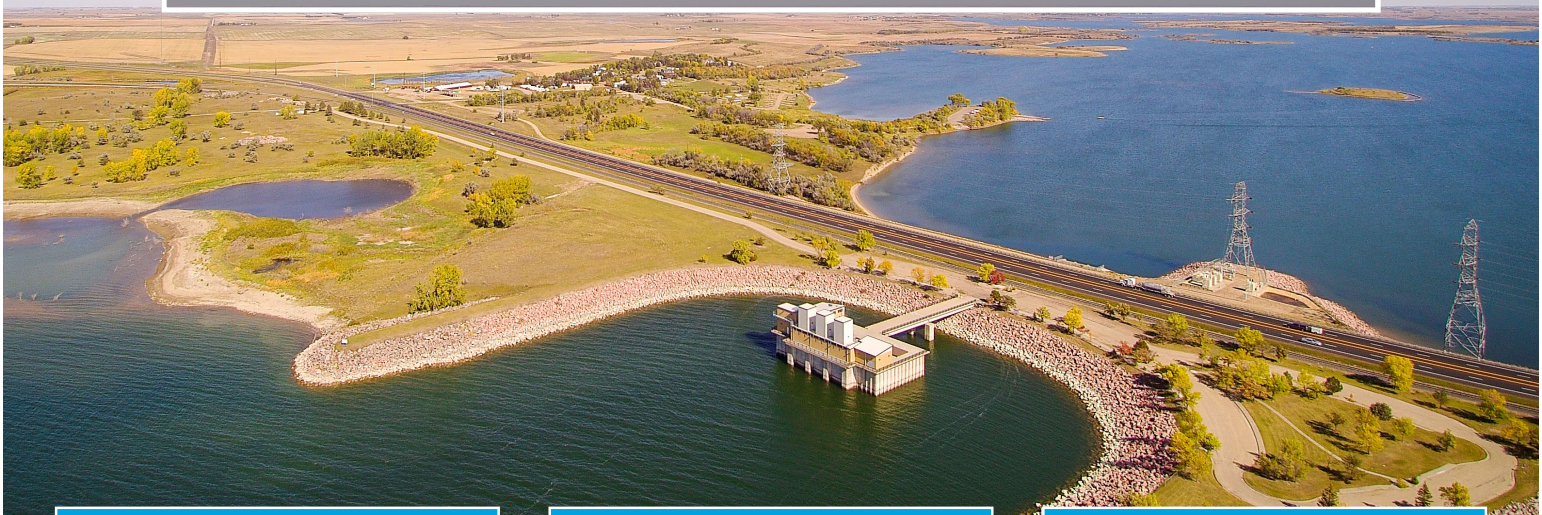
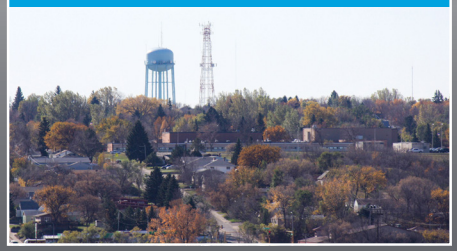
January 2023

North Dakota's

NORTHWEST AREA WATER SUPPLY PROJECT



PURPOSE & NEED



PROJECT FINANCING

LEGAL CHALLENGES

In order to address long-standing water supply and quality problems experienced by residents of northern North Dakota, the Northwest Area Water Supply (NAWS) project was authorized by the Garrison Diversion Reformulation Act of 1986 and the Dakota Water Resources Act of 2000 under the Municipal, Rural, and Industrial (MR&I) Grant Program. And even before that, as part of the federal Flood Control Act of 1944, water supply was planned for the region along with construction of the Missouri River mainstem dams.

In 1991, the state passed into law a bill creating the NAWS Advisory Committee, while giving the North Dakota State Water Commission (SWC) the authority to construct, operate, and manage the project. In 1993, Houston Engineering was retained as the pre-final design team for the NAWS project.

Construction of NAWS began on April 5, 2002, with a main line and associated features being built between the city of Minot and Lake Sakakawea. Later in 2002, lawsuits were initiated (see last page), delaying the project for years. The District Court ruled in favor of the project in 2017, and that decision was upheld by the Appellate Court in 2019 - ending 17 years of litigation. Today, construction on the NAWS project is back underway, with Phase I of the Biota Water Treatment Plant scheduled for completion in 2024, and overall project completion in 2029.

PURPOSE & NEED

Prior to the NAWS project, communities within the NAWS project area were supplied by groundwater, were constrained by water quality and quantity issues, and did not meet secondary drinking water standards. Total dissolved solids (TDS) are elevated throughout the project area, and many communities also experience elevated levels of iron, manganese, sodium, sulfate, hardness, and other contaminants. Berthold's groundwater from the Fort Union aquifer was found to be unsuitable as a public supply due to very high levels of TDS and sodium, and Kenmare's water supply contained arsenic levels that exceeded primary drinking water standards.

Since 2008, the city of Minot has been providing water from the city's groundwater wells to the communities of Berthold, Burlington, Kenmare, Sherwood, and Mohall, as well as to rural water systems including West River, All Seasons, Upper Souris, and North Prairie to temporarily alleviate some of the area's most severe problems. However, this is not a long-term suitable water supply. The Minot and Sundre aquifers, although recharged during the record flooding of 2011, continue to decline. The aquifers will be used to augment the water supply from Lake Sakakawea in the long term, and will be used to feed the system in the interim.

NAWS WATER USE COMPARISON

Missouri River System Capacity
69.4 MAF (million acre feet)

Projected Average Annual NAWS Water Use In 2060
0.0136 MAF

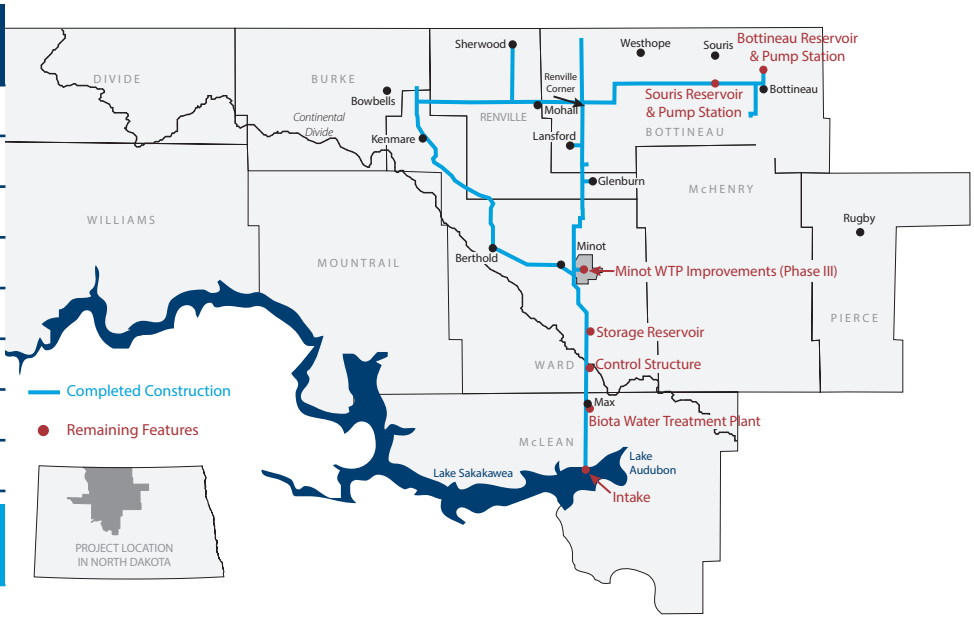
Average Annual NAWS Water Use
0.02% of Total Missouri River System Capacity

PROJECT USERS

NAWS is designed to service a project area of 81,000 people, (63,000 in urban areas). While population projections for the service area were based upon long-term historical trends in the region, namely outmigration and rural to urban migration, the oil and energy development that the state has experienced means projections used in the original project scoping may be conservative. For example, population projections in the 2015 Supplemental Environmental Impact Statement (SEIS) were to the year 2060 when water use is estimated to be 32% higher than today. However, census data shows the seven counties in the area where NAWS will ultimately provide service have already increased in population by 27% from 2010 to 2020.

PUBLIC SYSTEMS CURRENTLY BEING SERVED WITH NAWS WATER	
Minot	Sherwood
Burlington	Des Lacs
North Prairie	Bottineau
West River	Lansford
Berthold	Glenburn
Kenmare	All Seasons-Antler
Mohall	Minot Air Force Base
Upper Souris Water Users District	

PUBLIC WATER SYSTEMS TO BE SERVED IN THE FUTURE	
Westhope	Souris
All Seasons Water - System 1	



NAWS EXISTING PROJECT
FEATURES

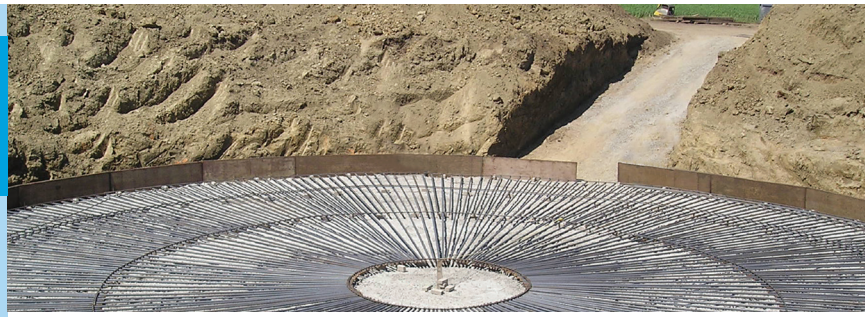
- Approx 267 Miles Of Pipe
  (224 Distribution, 43 Raw Water Transmission)
- 1 High Service Pump Station
  (2 Million Gallons Storage)
- 3 Ground Storage Reservoirs
  (5.75 Million Gallons Storage)
- 1 Elevated Storage Reservoir
  (1 Million Gallons Storage)
- 1 pump Station/Operations Center
- 4 Booster Pump Stations
- Upgrade of Minot's Water Treatment Plant
  (Filtration, Backwash, and Controls System)

PREFERRED ALTERNATIVE

The NAWS project will be of sufficient size to deliver a maximum daily flow of 27 million gallons per day. The water pipeline from Lake Sakakawea to Minot will be 45 miles of 30-inch and 36-inch diameter pipe. This pipeline includes a water storage reservoir and a booster pump station with treatment facilities. The remainder of the project will consist of some 250 miles of pipeline ranging in size from 36 inches to 4 inches in diameter, as well as eight storage reservoirs and 12 pump stations. In general, the pipeline will be routed to follow highway and other road alignments in the project area. The preferred alternative identified by the Bureau of Reclamation in the SEIS (2015) includes the already-completed project components, a bulk distribution system, the South Prairie Storage Reservoir, an intake and pump station at Lake Sakakawea, and a Biota Water Treatment Plant (Phase I) that is expected to be completed in 2024.

MINOT AQUIFERS

The Minot aquifer has been used as a source of public water supply by the city for the past 95 years, in conjunction with the Sundre aquifer and the Souris River. Although Minot holds a permit to withdraw water from the Souris River, the river is no longer used as a regular source to meet municipal demands due to treatment difficulties and unreliability of the river (quantity and quality). In addition, the future availability of aquifer water for the city of Minot is very uncertain, both in terms of quantity and quality.



PROJECT CONSTRUCTION & FINANCING

The $400 million NAWS project was intended to be funded on a cost-share basis with 65 percent federal funds coming from the federal Municipal, Rural and Industrial (MR&I) water supply program, and 35 percent through local funding. With the legal challenges facing the project and difficulties in the federal funding situation, the Department of Water Resources has continued to advance the project with state and local funds. The city of Minot has been covering the entire local share through a 1 percent city sales tax. Those users who purchase water from the system will pay for the operating costs of the water delivery system.

Between 2002 and 2013, under court approval, 45 miles of main transmission line were built from Lake Sakakawea to Minot, along with 185 miles of bulk distribution pipeline and associated facilities for the surrounding service area. Other project features completed include an upgrade to the Minot Water Treatment Plant, a high service pump station and a storage reservoir in Minot.

Construction resumed upon lifting of the court injunction in August 2017. Upgrades to the softening basins, associated chemical storage, and feed systems at the Minot Treatment Plant are nearing completion. The four remaining distribution pipeline contracts are finalized and construction of the Lansford Reservoir and Pumping Station is concluding. The condition of the raw water pipeline has been assessed, and Phase I of the Biota Treatment Plant in Max is under construction, with final completion scheduled for 2024. The South Prairie Raw Water Reservoir and Hydraulic Control Center are under construction and due to be finished in late 2023. The design phase of intake modifications at the Snake Creek Pumping Plant is complete and permit applications have been filed with the USACE - the first portion of the contract will be bid in the fall of 2022 with the second portion in spring of 2023. The remaining reservoirs and pump stations necessary to increase the capacity of the treated water distribution system to the ultimate design capacity, Phase III improvements to the Minot Water Treatment Facility, and Phase II/III of the Biota Water Treatment Facility will be designed and constructed as funding and water availability allow and as water demands dictate. In October 2022, the city of Bottineau was supplied with NAWS water.

LEGAL CHALLENGES

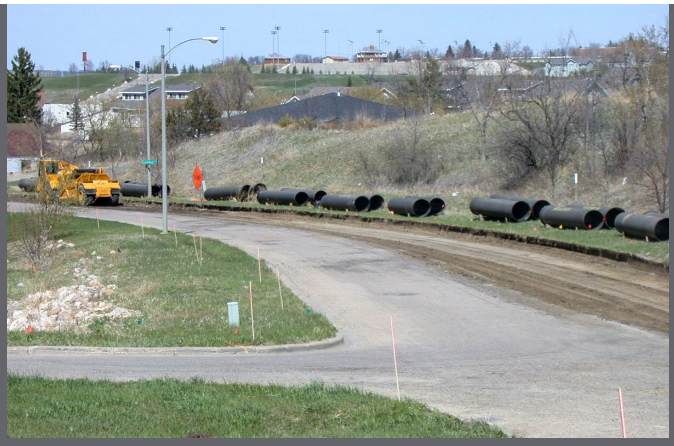
In 2002, a legal challenge was filed by the Province of Manitoba, Canada to stop the construction of NAWS, claiming that the Environmental Assessment (EA) conducted for the project was inadequate under the National Environmental Policy Act (NEPA).

In 2005, a court order required the Bureau of Reclamation to complete additional environmental analysis related to water treatment for potential biological organisms. A second court order issued that year allowed construction to proceed on those project features that would not predetermine a future decision on water treatment to reduce the risk of transferring invasive species.

In 2006, the Bureau of Reclamation initiated an Environmental Impact Statement (EIS), analyzing different water treatment methods to address invasive species concerns. The Final EIS was published in December 2008.

In February 2009, the Final EIS and Record of Decision (ROD) were completed. Shortly thereafter, the Province of Manitoba filed a supplemental complaint contending that the Final EIS was insufficient. Additionally, the State of Missouri filed a complaint against the Department of the Interior and the U.S. Army Corps of Engineers (Corps) in the same U.S. District Court. The State of Missouri alleged that the Bureau of Reclamation's Final EIS was insufficient, and that the Corps had failed to complete a separate NEPA analysis for NAWS. The court then consolidated the Missouri suit with the Manitoba suit. Manitoba's main opposition to NAWS was based on interbasin water transfers in North Dakota. The State of Missouri's main opposition was related to depletions of the Missouri River system.

In March 2010, the court issued an order that the Bureau of Reclamation conduct further environmental review with respect to two specific issues: (1) the cumulative impacts of water withdrawals on Lake Sakakawea and the Missouri River; and (2) consequences of transferring potentially invasive species into the Hudson Bay basin. The court modified the 2005 injunction in 2013, halting further construction - pending the completion of further NEPA review.



A draft supplemental EIS (SEIS) was issued in June 2014 and the Final SEIS was issued in April 2015. The SEIS was approached as a stand-alone document with updated needs analysis and considered all viable alternatives, in addition to addressing court-ordered concerns. The Record of Decision was signed in August 2015 with the conventional treatment option for the biota water treatment plant prior to crossing the basin divide as the preferred alternative.

In August 2017, the District of Columbia District Court ruled on the case in favor of the United States Bureau of Reclamation and the State of North Dakota. This action allows the state to move forward with construction on NAWS.

The Province of Manitoba and State of Missouri both appealed the District Court's ruling in October 2017. Manitoba subsequently settled with the Department of the Interior and dropped its appeal. The District of Columbia Circuit Court of Appeals affirmed the District Court's ruling in May 2019 - ending nearly 17 years of litigation on the project.

NORTH Dakota Be Legendary. | Water Resources

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